

BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

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IN THE MATTER OF: : Docket Numbers

ELECTRICITY MARKET DESIGN : RM01-12-000

AND STRUCTURE : RT01-2-000

(RTO COST BENEFIT ANALYSIS REPORT): RTO-10-000

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: RT01-34-000

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MIDWEST STATE COMMISSIONERS

REGIONAL TELECONFERENCE

EXTERNAL AFFAIRS

Hearing Room 11H-7

Federal Energy Regulatory Commission

888 First Street, NE

Washington, DC

Wednesday, March 13, 2002

The above-entitled matter came on for teleconference,
pursuant to notice, at 10:00 a.m.

PROCEEDINGS

DIRECTOR MEYERS: People will joining us as we go. And I am Ed Meyers. We will be taking a role call pretty soon.

The purpose of this call is to discuss the cost benefit study released by the ICF Consultants at the FERC open meeting of February 27, 2002, and so we are just going to have a discussion here to help you file your comments.

As you know, comments are due April 9 and reply comments are due April 23. I think our discussion here this morning will also help prepare for future State, Federal, regional panel meetings which will be policy oriented and perhaps held out in the Midwest and the other regions.

What we are going to do starting off here is just introduce ourselves here at the FERC and also the ICF Consultants and then we will take our role call.

MR. RUSSO: My name is Tom Russo. I am assisting Ed in the State, Federal effort here at FERC.

MR. MERONEY: This is Bill Meroney. I was the FERC Project Manager for ICF's work.

MR. WHITMORE: I am Charlie Whitmore. I am technical help on the cost benefits study.

DIRECTOR MEYERS: And let's go to ICF.

MR. TURNER: Tim Turner of ICF Consulting. I was

the Project Manager at ICF for the work that was done.

DIRECTOR MEYERS: Great. Let's go to the states. We can go state by state here starting with Arkansas and if you would give your name starting with Commissioners and then staff.

We have Commissioners Sandra Hochstetter and Lavenski Smith. Sam Bratter, Mary Connan and Richard Howell.

DIRECTOR MEYERS: We welcome you. We will go to Illinois.

I guess I am the only one here. Ken Haundreizer. I am assisting Commissioner Kretschmer.

DIRECTOR MEYERS: Good morning. Go to Indiana. David Ziegner and Karen Boychen.

DIRECTOR MEYERS: Good morning. Iowa, please. Mrs. Diane Munns and with me are John Pierce,

Carmen Bay and Dan Fripp.

DIRECTOR MEYERS: Um-hmm. Good morning and Kansas, please.

This is Commissioner Wine, John Wine, and Commissioner Cynthia Claus with staff members Dana Bradberry and Kyle Clem.

DIRECTOR MEYERS: Okay. And Kentucky.

Commission Martin Huelsmann, Bob Spurlin, and Gary Gillis.

(Ohio interrupts.)

DIRECTOR MEYERS: We are in Kentucky right now,
but we will be getting to Ohio pretty soon.

Richard Wrap and Martha Morrison of staff.

DIRECTOR MEYERS: Great. Michigan?

Nick Heiser, I am the representing David Svanda.
Dave is on the research collaborative group. He is tied up
with legislative committees this morning.

DIRECTOR MEYERS: That's good. We will go to
Minnesota.

Burl Harr. I am executive secretary with the
Commission and with me Claire Barron, Greg Scott and Nancy
Campbell who is a Federal liason with the Department of
Congress. Also Clark Campbell from the staff. We are
expecting a couple other commissioners to be joining us.

DIRECTOR MEYERS: Welcome, Missouri, please.

Mike Proctor on the staff of the Missouri
Commission. Steve Gaw and Commissioner Simmons will be
joining us later. Also Scott Helm here on the Missouri
Commission.

DIRECTOR MEYERS: Do we have Nebraska?

(No Response.)

DIRECTOR MEYERS: Now, let's go to North Dakota.

Commissioner Susan Wefald. With me is staff
member Miles Giller.

DIRECTOR MEYERS: Ohio, please.

This is Liz Durting. I am the Federal Energy Policy Coordinator and Rick Lahon, the Chief Commission is with me. We have some other staff members who were interested, but they are not going to be able to join in because they are at the MISO meeting today.

DIRECTOR MEYERS: That will be fine. And let's see. South Dakota, please.

We have Commissioner Pam Nelson and Bob Sergeant and staff people: Dave Jacobson and Lorraine Lease.

DIRECTOR MEYERS: Let's see if we have covered the Midwest. Do we have Wisconsin here?

Yes, commissioner Burt Darr. Staff members John Fry and Scott Colman.

DIRECTOR MEYERS: Great. Did I leave anybody else from the Midwest?

OKLAHOMA: You left out Oklahoma.

DIRECTOR MEYERS: Didn't want to do that.

Commissioner Denise Bode's office. She will be here in a minute. This is Linda Guthrie and staff also.

DIRECTOR MEYERS: Do you want to identify the staff?

Ed Ferrar and Kim Zimmerman.

DIRECTOR MEYERS: Great. And anybody else on the call? Ohio.

For Ohio I want to add Jan Curlack.

DIRECTOR MEYERS: Okay.

This is West Virginia. I guess we are not sure
if we are Midwest or not.

DIRECTOR MEYERS: Okay. Welcome to the call.

Dave Ellis from the West Virginia staff.

Chairman Williams is supposed to try to join us, but he is
not here right now.

DIRECTOR MEYERS: That will be fine. Anybody
else on the call?

This is Sam Ogle from the Illinois Springfield
office.

DIRECTOR MEYERS: Which commission?

Illinois Commission.

DIRECTOR MEYERS: Anybody else?

Likewise Tennessee, we are not sure where we
belong. This is Dan McCormick with the staff. Also Ruth
Babler and Director Malone may join us later.

DIRECTOR MEYERS: That's great. Welcome also.
Any other people?

(No response.)

DIRECTOR MEYERS: All right. We are not going to
have a presentation here this morning. You have got the
report and read it and absorbed it to some degree.

So we are just going to kind of get right into

it.

This meeting is transcribed and we issued a Notice on it. We are following the FERC Order of November 9 of 2001, and so we are going to ask you to introduce your names before you speak and even though we know many of the people who will be calling, just go ahead and give your first and last names and your state when you talk.

And we are just going to now get right into it and see what questions or comments that you have relative to the cost benefits study.

UNIDENTIFIED CALLER: Who is staff and who is the ICF staff?

DIRECTOR MEYERS: We did that. I am Ed Meyers and I am Director of State Relations here at the FERC.

MR. McLAUGHLIN: Mike McLaughlin, the Director of Tariffs and Rates Central in the Market of Tariffs and Rates.

MR. MERONEY: Bill Meroney. I was the FERC Project Manager for this study.

MR. WHITMORE: Charlie Whitmore. I do strategic planning at FERC and helped out with the study.

DIRECTOR MEYERS: Tom Eusie will be joining us. Let's go to ICF.

MR. TURNER: Jim Turner. I was THE Project Manager for the FERC study and managed it between the order

of November and when it was issued on February 27.

DIRECTOR MEYERS: Okay. Now, that all those preliminaries are out of the way, let's get right into it.

What questions or comments do you have?

MR. ELLIS: This is Dave Ellis from West Virginia. I guess we have kind of a clarifying question.

We would like to ask about the benefit analysis. Specifically maybe throughout but on small -- in summary, we might focus on that where you show assumptions from base case ranging from 400 million dollars in 2004 to 6.2 billion dollars for the entire period maybe.

The entire period savings is represented to be a net present value none. The way we are looking at though it doesn't look like you took out the start up costs from that number.

So are we correct in assuming that that 6.2 billion dollars that shows up in that table is not net of start up costs?

MR. TURNER: This is Jim Turner. Yes, that's correct.

MR. ELLIS: In your analysis which are assumed to be from half a billion dollars to five billion dollars, get a real net number would be subtracted out of there?

MR. TURNER: That's right. The benefits you see there are strictly within the model. We are trying to keep

that distinct so that people don't get confused. And it is not that difficult to do the net from there.

MR. ELLIS: Okay. Just wanted to clarify that.

MR. GILLIS: This is Gary Gillis, Kentucky, and we have been looking at some reviews of the analysis and we also have some of our own questions.

But could we get a copy of the RFP that was issued to ICF to see the work that was supposed to have been done?

DIRECTOR MEYERS: Yes, we can do that. We will send it to Kentucky, to you Gary.

MR. GILLIS: Yes, that would be good. I guess we are wondering about some of the assumptions, some of the inputs.

We are just wondering what additional generation has been included, what additional costs of transmission have been included, what upgrades have been included. You know, the additional costs that have gone into the study and particularly naturally as far as our area is what we are concerned, but what additional merchant plants were included, where they were included. Basic assumptions as far as the study was concerned.

MR. TURNER: Jim at ICF. I think that involves both a procedural question for the Commission regarding further information and also maybe a little bit of

discussion from me on what is actually an input assumption and what comes out of the model.

MR. GILLIS: Okay. We would like any information we could get, certainly.

DIRECTOR MEYERS: This is Ed Meyers. Do we have a list of assumptions somewhere in this that we could provide?

MR. TURNER: Yes, we actually have taken the assumptions document that you all were seeing during the process and taken out anything that we considered proprietary and that's actually available right now.

So that's something that could be given to folks that gives them more like 50, 60 assumptions presentation.

DIRECTOR MEYERS: So we can send out, what, 50, 60 assumptions you say to everyone in the states?

MR. TURNER: Yes.

DIRECTOR MEYERS: We will be doing that. When can we do that? Today?

MR. TURNER: Probably, yes. It has been completed. So as long as I can make sure that that's been approved at the senior level, then it should be all right for release. We already made the changes they suggested.

MR. ZIEGNER: This is David Ziegner from Indiana. I didn't mean to interrupt Gary, but Gary had requested the RFP. Could we also get a copy of that,

please?

DIRECTOR MEYERS: Yes. And perhaps we should make that available unless there is a Federal or whatever restriction, there is none that we know of.

MR. RUSSO: There is none.

MR. MERONEY: I think it is a public document which should mean that we do everything from e-mailing it to everybody on this list or putting it on the web.

We need to look into that, but it is a public document so there should not be any barriers doing any of those things that I can think of.

DIRECTOR MEYERS: We will send that and we will send the list of assumptions. We will have to clear it through here so we don't know how long that will take, but those things will go out to everybody.

MR. GILLIS: This is Gary Gillis, Kentucky again. You mentioned that some of the proprietary assumptions could not be disseminated. Can you share what some of those proprietary assumptions are?

Not specifically, but generally.

MR. TURNER: Jim Turner at ICF again: Yes, the system -- the modeling framework that was used was originally primarily developed for the Environmental Protection Agency.

As a result, it has been largely publicly

reviewed and released. However, there are a few specific areas that ICF considers to be proprietary knowledge that's been developed over many years.

Typically they are not the ones that people are that interested in. However, they would be things like the details of the coal supply. There is 40 some coal supply regions that we represent. The details of each of those regional coal supply curves would be considered proprietary by us.

That's the kind of thing that would be not given out publicly. It is the kind of thing we share with clients. It is to protect ourselves basically.

DIRECTOR MEYERS: Jim, how about if we just list somewhere in the assumptions a way that doesn't give away anything of a proprietary nature, the general characterization of what those proprietary type assumptions are? Can we do that?

MR. TURNER: I will make an attempt at that.

DIRECTOR MEYERS: Okay.

MR. TURNER: It is a very complex model. I can identify some of those quite easily. I can't guarantee it will be fully comprehensive.

DIRECTOR MEYERS: That will be great.

MR. TURNER: Of course, we really don't release some of the code. We are really talking about people

dissecting the model. Sometimes they want the actual code so they can run it themselves.

It is not that kind of a public model. But I will make an attempt to characterize those assumptions in some detail. Describe them at least.

DIRECTOR MEYERS: Okay.

MR. TURNER: I just wanted to mention that on page 28 of the study, there is that docket graph of that framework and you can see what goes in versus what comes out.

If you are interested in, for example, merchant plant bills in Kentucky, some of those will be inputs because we include announced plants, plants that are already in construction and that are going to be built in the next couple of years. Those are input assumptions.

Output assumptions would be other plants that the model decides to build on its economic basis. You need the model output to see where plants are built. That's a question for the Commission.

What level of output are they going to release from these computer runs basically.

DIRECTOR MEYERS: Okay. Good.

MR. PROCTOR: This is Mike Proctor with the Missouri Commission. As long as we are asking for things, the tables that showed the savings in cost, costs --

MR. RUSSO: Which table is that?

MR. PROCTOR: For example, table 37 on page 65 of the report splits it up by component which is interesting, but I am wondering if it would be possible to get ICF's estimate cost for each of these cases by region rather -- in addition to just overall.

MR. TURNER: I am not sure who should answer that. This is ICF again. The Commission basically owns the runs in the output. They pay for them and they pretty much own them.

MR. MERONEY: This is Bill Meroney. I think there is two levels to this question. One is can it be extracted from the model to put it in a way that's useful to people, and then the second just is it, you know, will it be made available or not which is obviously something that we would need to run through everybody here.

And so maybe we should try and answer the first one first and give people a sense of what they would get.

MR. TURNER: Do you want me to do that, Bill?

MR. MERONEY: I would suggest this. It is best coming from you.

MR. TURNER: Well, again, Jim Turner at ICF. Yes, the model will be generating these kinds of production costs for each of the model regions.

So to the extent that you can get down to a

particular model region, these kind of costs will be reported by the model.

There can be some interpretation issues with production costs only because sometimes a region is actually building a plant that actually is going to be serving energy or capacity to another region, the neighboring region.

So there can be some interpretation issues and we wanted to report the system side costs because that's kind of a closed system. It has got everything in it. When you are down to the regional level, there can be some discrepancies, if you will, when you are looking at your own regions for cost.

However, that doesn't keep people from looking at them all the time. It certainly does come out of the model.

DIRECTOR MEYERS: And in previous calls to the states and the regional panels and also in the FERC open meeting of February 27, some of the states indicated that they would be reviewing this cost benefit analysis and perhaps in their comments of April 9 requesting additional runs or additional information that you may need to conduct your analysis in your region. So anything further on this table 37?

(No Response.)

DIRECTOR MEYERS: Okay.

MR. GILLIS: Gary Gillis, Kentucky. I don't want to dominate and ask all the questions. I was curious about the margin of error in the study. I don't see that in there.

I am just curious what that is --

MR. TURNER: Jim Turner again. Interesting question. If by that you mean looking for something like a statistical approach, probabilities, essentially what we did was try to separate out the types of benefits and make an indication of which ones were the most important for the results.

You need a couple of different things. One is a lot more computer runs because those kinds of competence intervals are the results of kind of a decision tree approach.

While we do that sometimes, you really need dozens of runs or maybe hundreds to get that kind of distribution of output. I think it is more reasonable in this concept to talk about how likely the overall policy effects are and then you have sort of an order of magnitude indication of the size of the benefits there.

I would argue that the range on the benefit of being so broad tends to give you a pretty good sense of overall uncertainty, but there is a lot more discussions

that you have to have to nail down the likelihood of a particular system here.

MR. GILLIS: That begs the question of how valid this study is. If the inputs include announced merchant plants which in Kentucky there are 29 announced merchant plants which includes 50 percent generation to our existing generation and we are grouped with other states: Ohio, Indiana, West Virginia and part of Illinois, part of Virginia I believe.

Our rates if you average those rates, Ohio being the highest at 6.2 cents last look and our 3.9 cents coming up to our region showing a two to 3.9 percent benefit in average rates with no margin of error, I question how you can have a valid study I guess.

MR. TURNER: Well, this is Jim again at ICF. I think that I would make two comments. One is that just for your information, we don't include all announced plans.

ICF makes judgment calls. We monitor all the announcements and citing process and we decide internally when a plant is actually likely to be built and most of those announced plants probably aren't going to be built.

So there is a question of not just taking a list that's been furnished or asserted by developers, but rather making a call about either when the shovel is in the ground and the construction is underway or when the permitting and

citing process is so far along it is reasonable to assume that that plant will come into play. So I just wanted to clarify that.

As far as the study's validity, maybe that would require a little more on your part of what constitutes a valid study the way you are thinking about it because scenario analysis can be done in different ways, different ways that actually do characterize relevance, relevant factors and can characterize uncertainty in that way.

I am curious as to what you would mean by a valid cost benefit study.

MR. GILLIS: Well, I guess we were looking to determine the additional costs that would be included in our area and the region and the RTO that would be necessary to effect electric competition and what benefits would be derived from that.

And I guess that's why I asked for a copy of the RFP because I am not sure -- that was a question we were trying to determine.

MR. TURNER: That could imply, for instance, more sensitivity analysis to key factors like actual gas prices, that kind of thing?

MR. GILLIS: Yes, perhaps. Um-hmm. And I am really getting in deep water because I am not an economist.

MR. TURNER: That might also imply a look at market structure and strategic behavior which we did not do in this study.

If that's what you are interested in, how many the supply competition really induces competitive arbitrage. That's actually a very interesting question and it is not a question that we were dealing with in this long run national concept.

MS. BODE: Denise Bode, Oklahoma. I wanted to kind of follow up on some of Jim's questions because we had a number of questions very similar.

As a bit of background, Oklahoma has had hired Oak Ridge National Laboratories and they have done modeling on Oklahoma. Both we have actually had three phases or at least two phases of that study.

We have actually looked at costs, generation costs and production costs, and we also obviously looked at our absorbable costs so we have looked forward and backwards. Our costs are \$10 a megawatt lower than what is shown in your study, both from a historical and as well as looking forward number is what we have.

It says Oklahoma, STP West, that's another issue because Oklahoma is included with the panhandle of Texas and New Mexico and there is only one transmission line and we virtually send no power.

So putting us in for purposes of your analysis, it would really -- I mean it is not a valid inclusion. STP just used it for some analytical purposes but not for this kind. The only reason STP put that in there and clearly all our power and our transmission is with Kansas and Arkansas and going east, not west. I just share that.

The regional concern and also the fact that we come up with megawatts when we believe our costs are more like 26 to 28. That's been validated by Oak Ridge within the last six months. So I just want to share that with you that the numbers for us we believe are absolutely wrong and way off just in terms of energy prices.

And then another thing I guess is that we have a series of questions. I think some of which can be answered by the input that you provide us in your study, but obviously with Oklahoma being the eighth lowest electric prices in the country, we have a very great concern about how the change can impact us and so this study is very important to us to look at that, just as it is to Kentucky and some of the other low cost states.

MR. TURNER: This is Jim Turner again. That's a very interesting set of comments. Let me first ask you: I am guessing that you worked with Dan Hadley and company at Oak Ridge with the -- or CADD model?

MS. BODE: That's right.

MR. TURNER: I worked with those guys and helped develop and pay for it when I was at the Environmental Protection Agency in the mid '90s. That model was designed specifically to be used by states.

They were encouraged to go out with states and they worked with other states, Ohio. It is a nice, flexible model that you can customize very rapidly for particular calculations.

I would say for your specific comments, a lot will depend on what years you are looking at. To have costs that border the mid 20s of megawatt hours, it would be interesting to see the difference between your existing generation base today and the capital pay off to some degree and the future -- at what point you bring in new combined cycle plans and how much do those cost.

That would be the kind of comparison -- I wouldn't mind looking at that study. I wouldn't mind doing the comparison for you.

MS. BODE: I think that would be very helpful for us. Obviously phase two of our study did include and did look at all the new combined cycled plants that were on line for Oklahoma.

So we might -- we looked at the present and ten years out. We did do this analysis.

MR. TURNER: Yes, the new plants tend to push

toward sort of a long run, regional cost pricing that is a lot more similar over time from region to region just because they are mostly all building combined cycle gas so it ends up being a gap in construction costs and things like that that create regional variations.

But over time you tend to a more similar price gap. It is quite likely that there is a lot of detailed state by state aggregation issue going on here which needs to be sorted out probably.

MR. MERONEY: This is Bill Meroney at FERC. One of the -- I know we are not necessarily supposed to be the ones asking the questions, but one point that might be worth a short discussion would just be what within the modeling framework these prices that people are seeing in the report actually represent.

Because the regional firm electrical prices are a combination of a couple of kinds of prices in the model. Jim, would you want to give a short description of what's in those prices?

MR. TURNER: Yes. This is Jim Turner at ICF.

What we have is a number of different demand segments in each region. So the first thing in your looking at an average annual price which is actually built up from segmental prices, different levels of demands, that's point one.

Point two: Each of those segments is clearing on a supply demand basis which doesn't necessarily come out the same way that a production cost clearing mechanism would give you.

It could be a little bit different. You could be exporting to a neighboring region. That could be affecting the segmental price. That kind of thing.

Thirdly, there is a capacity market that is separate from the energy market under this framework and so you are actually pricing capacity that you might have to build to meet reserve margins and that capacity value is separate from the energy value.

And those two things are put together into these what we call all in prices or you could call firm prices. Because you have got your capacity secured as well as your energy. You can decompose that price down into capacity and energy separately for each of the load segments in a region as opposed to just having one annual price that includes both components. Is that a summary?

MR. MERONEY: Sounded fairly comprehensive for me.

MS. WEFALD: Susan Wefald, North Dakota. I remember you previously referring to the chart on 66 or were you referring to several charts and can you tell us which ones you were referring to?

MR. TURNER: All of the price charts that we report are a combination of capacity and energy as well as an aggregation up to the annual level. So that they combine a lot of separate segmental energy prices and capacity prices.

Each region in the model output would be reporting a number of segmental energy prices and a number of segmental capacity prices. That would be a lot more information than the information in those tables in 66 or any of the other charts that describe the pricing.

MR. WHITMORE: Jim, this is Charlie Whitmore at FERC. There was an additional question in the Oklahoma question that you didn't touch on I think.

MR. TURNER: The regional breakdown in the transmission?

MR. WHITMORE: The transmission going east and opposed to west, yes.

MR. TURNER: Well, the general process ICF uses to divide up regions is based on transmission bottlenecks that would cause price divergence. It is always worth looking at a specific region when people have questions.

Usually ICF has in the past done work for clients that's broken down STPs in this case or some other region and we have actually disaggregated it, looked at the transmission and put the region back together for

simplicity if we think those -- bottlenecks in the region don't cause significant price diversions.

I would have to follow up with Oklahoma as far as how that's broken down in the model for this application. So I think that's a valid question and it just needs a bit more follow up than I have got here.

I need to talk to some of the transmission guys to see how they actually did that. So that's something we would need to follow up with.

MR. PROCTOR: This is Mike Proctor with the Missouri Commission. I have a comment, then a question.

Looking at the transmission only case, your model showed production costs decrease; but if you look at wholesale prices, they increase overall in each of the RTO regions. The net impact on deregulating customers is detrimental. It is difficult to understand how you tear down trade barriers and come up with that result and it is counterproductive.

I think the report needs to explain why that has happened.

In addition, since there are no benefits to deregulating customers in the transmission only case, the benefits come from the RTO policy case which the difference between those two have to do with increased generation deficiencies.

And my concern is, as I looked at the report, my concern is there is a clear statement of what were assumed about increased generation efficiencies, but there was no explanation of how these efficiencies were derived or where they came from for the parameters that were looked at, the increase in the availability and the improvement in the heat rates.

And so my question: Since those increased deficiencies are what are carrying the day for customers, for deregulated customers, my question is: Can the report include more detail, explanation of how these efficiencies were derived?

MR. TURNER: Does the Commission want to comment on that?

MR. WHITMORE: Let me break that into sort of two issues. One has to do with the transmission only case and what one makes of the rather odd finding that costs go down and prices go up a little bit.

The other has to do with justifying the assumptions about or explaining the assumptions about generation efficiencies.

On the first part of it, I think the important point there is that the implication is that if all RTOs were going to -- was to improve transmission a little bit, then the game might well not be worth the candle. And

that's an interesting kind of conclusion.

We have always thought that the reason to have an RTO was precisely that it enabled you to have a competitive market which would get you the other benefits.

I think what this study does is to show that the benefits from the markets that are built on top of the RTOs are really the crucial issue. I believe at least that RTOs are in essence a prerequisite to getting those markets in place and working; and that's the fundamental reason to get the RTOs in place.

That's obviously a subject that we can have a lot of discussion about and I think the report nicely points up the necessity of having that discussion.

Jim Turner, you and I talked about this a little while ago; and I think you have some thoughts about the assumptions that went into this?

MR. TURNER: Yes. Also let me point to page 57 of the study. That picture of illustrative supply curves there is an attempt to explain how pricing can go up when production costs go down.

I mean we are aware of that as an issue and we have made a stab there at explaining it, in discussing it. It really just depends on the slope of the region's supply curve. If you are exporting more power and you move up on your supply curve, even though the supply curve is being

pushed down by production cost improvements, you may still end up with a net price increase. That's just the way the supply curves are set.

You can imagine a world in which all the supply curves were set up such that production costs decreases would always give you energy price decreases.

It just so happens that that's not the way the generator case in the country today at least as far as our database is concerned.

MR. RUSSO: Isn't that because each region has a specific supply mix of generations so, for example, if you are generating power with coal plants and you have got a large coal base as opposed to another region that has, let's say, lower costs, a lot of hydro, you would see different things happening.

In other words, you wouldn't have to jump from coal to a higher priced source of power.

MR. TURNER: Yes, it all depends on whether you have got large units that have some additional export capability; and you sort of walk along a slack portion of your -- then there really isn't a big energy impact. It is only if you use up your low cost supply and go to something higher priced like a combustion turning or a peaking unit of some sort.

That would affect these energy price increases.

That just depends on which region you are in. You can look at the specific region figure and out the fuel mix and what they are generating before and after they increase their export.

On the generation efficiencies, those assumptions generally speaking are sourced previous work. There is a reason for that. The reason is that we have this very constrained time frame to do this particular study.

I can tell you that the kinds of approaches that were taken in past work and this would be either previous FERC analyses or Department of Energy analyses like the comprehensive Intracompetition Act, all which are listed in the report earlier.

The kinds of approaches they would take would be looking at sort of a best practice type analysis. It is a fairly common approach in engineering and in actually financial and corporate analyses where you look at the best performers in an industry and you ask yourself whether the under performers can catch up to the better formers.

That gets down into some fairly detailed statistical approaches because you wouldn't necessarily want the best performers. You might want to average the top 25 percent, for instance, which I understand was part of the approach used for these generation efficiency improvements.

It is not like every plant gets to be as good as the best plant. Rather, the plants on average move towards the current best performing plants.

So for heat rates, for instance, you would look at how well other plants of the same type are performing on heat rates and you would make the assumption and it is an assumption that other plants under competitive pressure will be induced to approach that other plant's performance, that it is already achieving.

MR. WHITMORE: This is Charlie Whitmore. In your list of assumptions that we are going to be passing around to people, are these assumptions included?

MR. TURNER: Most of the assumptions we were looking at before have to do with the base case rather than the change towards the scenarios. So that might require a little bit more insertion of a few more slides I guess I would promise to do in a timely fashion.

MR. MERONEY: One of the things that was mentioned, previous sources, would have been some of the environmental analyses that were done for the Commission. We certainly would have to be looking at those.

For example, if suddenly we did a cost benefit analysis where things got much more involved than they were when we did an environmental analysis of a very similar situation a few years ago, that would be a little

suspicious. So we had to some extent prior examples on the table of our own and others that were the first source of information.

And many of those came from environmental analyses where I think it is at least arguable that no one would have an incentive to exaggerate the impacts. The impacts that you would look at under an environmental analysis would be fundamentally different than the operational impacts that you would expect if you were looking at the cost impacts.

So the range was kind of bounded by looking at previous studies, other studies of efficiencies and basically the position that we were in in doing this analysis vis-a-vis previous impact analyses.

MR. MALONE: This is Melvin Malone from Tennessee. I have a few questions. Does it include start up costs, and we know that in the study you didn't consider operating costs. So that is a question of what would be left of the net benefit if we had included all those costs?

And also here in Tennessee being covered by TVA, it would be very interesting for us to see the cost savings for the TVA region under that scenario. I think that should be included in what you would be passing around to the regions. I don't know. That would be very helpful for us.

The question about the -- to me, I don't know if you extended your study -- but I would -- I am quite confident that the difference in the net savings, cost savings, may not be particularly different in all the different scenarios.

That would be also a problem if they are not really different from each other. My last question, observation, is we have changes in prices and I look at the TVA region to see, the scenario, in which you find that the prices go up or down.

In general, even if the prices go down, we cannot know how this will -- the consumer -- because the consumer doesn't show a consumer -- so we can combine the consumer cost savings and the other effects of the -- in making a good recommendation as far as your study is concerned. Those are my observations of the question.

MR. TURNER: Does Commission staff have any comment on that?

MR. MERONEY: There are a lot of questions in there. I don't know if I can roll all the way to the back of the timing.

Maybe, Jim, you could handle the ones that you heard because most of them I thought they pertained to the specifics of your analysis.

MR. TURNER: Yes, I thought so too. I thought

there were four particular questions.

The first one is about the netting of the production costs and start up costs. Part of the reason we kept that separate was that there is a range of the start up cost estimates too. You have to decide which start up cost. How many tables should we make is basically what that was about.

We decided that we could let leaders take the net off the low end or the high end on their own and the information is there so that people can do that.

I would argue that it is an exercise which just let's you, you know, a multiplication of the kinds of result tables you would have and we decided to, if there is an error here, we erred on the side of simplicity.

Transparency if you will.

The start up costs are a one time cost. Even though it could be paid over time, it is a one time cost as opposed to a stream of annual ongoing benefits. So even if the start up costs are on the high side, there is still some net benefit even from the transition on the case, although it is a small -- you could argue it is a small net benefit in this instance.

Just to address how we approached that issue, as far as regional production cost changes, I think that's a question that most regions are going to have and a couple

states have already expressed that interest.

In your case, for TVA, again, that's simply a question of how much more detail from the output is going to be available; and I think that whole set of informational questions is going to be brought to the Commission and they will make the call on that.

Again, the model does produce these costs and again there are some interregional dynamics to those costs which need to be kept in mind whenever you are looking at those more detailed production costs.

Thirdly, you raised the issue of statistical significance and that's, to me, that's a very interesting and somewhat puzzling methodological question in a study like this.

The concept of statistical significance generally comes from econometrics and the econometrics tradition in economics more broadly so that you are interested in regression analysis, you are interested in causeability.

You are interested in being able to link one variable with another in a statistical framework. To get to statistical significance and constant intervals, as I said before, can be accomplished with a model like this if you are very careful and if you are asking the right kinds of questions.

It is my view, my view personally as an analyst,

that this study wasn't asking that kind of question. This study took a much more scenario approach to the issues in which you associate a number of assumptions together in different scenarios.

You can take each of those scenarios and vary them one at a time which we would call peer sensitivity analysis and you can learn a lot more at least about how the model works and potentially something about how the world works when you do that; but I guess I just don't see the statistical significance concept applying very cleanly in this particular concept, although I would be happy to consider that some more and talk to some of my colleagues about that who have decades of optimization modeling experience.

Just put that one in the kind of question mark spot I would say.

Then finally you asked about price impacts on consumers and you mentioned the term consumer surplus. Again, a very interesting concept of this kind of work.

Traditional profit analysis particularly tax analysis focuses a lot on consumer and producer surplus. Any time there is a change in the efficient outcome, there is a sharing of that between consumers and producers which is typically set up by their relative coelasticity of pricing and supply and demand.

I won't go into that. I won't give a lecture on producer/consumer surplus.

In this context, there are a couple ways you can look at that. One, this is -- people ask what is the impact on consumers of these production cost savings; and my answer was that kind of analysis can be done a number of ways. There are a lot of approaches and you get into the wholesale versus retail questions.

How much price increase or decrease actually passes onto some consumers depends a lot on their rate treatment. You can think of native low as kind of a contract that actually dampens the price movements one way or the other.

Some consumers have the prices rolled through to them directly and others don't. That requires a lot of assumptions. We just didn't want to go through that in this instance. And people can take a number of easy approaches to that issue or they can take much more complicated approaches to it.

Then a final comment on producer surplus. As we did the study, it occurred to us that producer surplus in a semi-regulated industry is also an interesting concept. We at some point stopped thinking about producer consumer surplus and started thinking about earnings.

Export revenues in a state whose prices were

going up are also increasing. Your exporting power and the revenues from that is coming back into your state or your area.

As a result, the generators are gaining in revenue; but that's not necessarily a surplus that they put in their pocket and walk away with. It could be construed as earnings, earnings before interest, taxes, etcetera, etcetera.

That may in fact be subject to further regulatory treatment. Again, you get into a deep area of assumption and state by state variations which in a national long run study like this, we felt it would be better to lay those issues on the table and hopefully that's the kind of discussion that people will be having.

Sorry for that long answer, but it was four questions.

MR. MALONE: Thank you. The issue of operating costs, since you assume that there are so many new plans, I think the assumption you made in the study that the operating costs may not be that high. They may just be marginal in general and then they may not affect the results of the study, is that the assumption you used?

MR. TURNER: Yes, that's correct. In fact, we decided that we would -- it would be difficult to understand or -- whether you would be saving money on

operating costs or spending money because arguably when you consolidate existing operations, you get something like merger type savings.

And those can be significant. That's going on the other side against the concepts that the RTO might have more functionality, different kinds of jobs, auction clearing, market oversight, other functions that current system operations aren't doing.

So there is sort of a cost on one side and savings on the other that we just decided was going to be a net wash for this study. So we basically left that kind of net to zero and left it alone.

There are some interesting issues there if people wanted to follow up on it.

MS. HOCHSTETTER: Sandy Hochstetter from Arkansas. I am just curious. Implicit in what you just said, is it accurate that one of the assumptions in this model is that you took all generations that exist including rate based generation that's dedicated to in a lot of states and you rolled that into the wholesale market and assumed a retail competition for everybody?

MR. TURNER: You could say that we assumed everything on a spot basis and you want to characterize that as everybody has retail access. I suppose -- you know, again it begs a question of what happens to consumers

in the end.

We discussed native load requirements a lot.

This is the kind of model where you can restrict generators based on contract treatment.

For example, must you run a unit for a requirement contract. You can constrain those units to be operating even if there is a highest cost unit that could be operating. In this case the issue becomes does native loads requirement contract, do they effect the competitive results? Do they effect the economic dispatch? And if people with native load requirements are running more expensive generation, that would be something that would be relevant and we would consider that and include it.

I think we concluded that people are trying to think about native load treatment right now. It is not to force extensive generation to run, but rather to make sure that there is less expensive generation is in fact operating and serving load in their region.

We decided it would be incorporated into the economic or the efficient dispatch of generators within the region. So there is some very good issues in that question. The way we handled it in the end was by letting all the regions clear in the common wholesale pool, but we are hoping that we captured native load treatment when we did that and let people think native load treatment is

increasing within their region.

MR. WHITMORE: This is Charlie Whitmore at FERC.

I just want to add to that as far as I know there is no assumption whatever in here about retail access one way or the other.

And to sort of restate what Jim just said: The key thing in terms of figuring out what the savings are is that the cheapest set of generating units get dispatched. Now, for the sake of the model that happens at a particular price; but the way that states treat plants that are dedicated to native load could vary considerably and so the benefits from that could go to local rate payers or not depending on how the states sets things up.

MS. HOCHSTETTER: Is there any way of running this model and doing this sensitivity analysis that looks at incremental generation requirements in portions of the country that don't have retail competition and are not likely to have it in the future and look at the benefits of RTO relative to incremental generation?

MR. TURNER: You might have some of that already in the results. You can sort out by the changes in regions already. Do you mean, for example, preventing the model from building incremental generation in some regions or how do you mean -- what are you saying, incremental generation? How are you thinking about?

MS. HOCHSTETTER: I am thinking about that in terms of any new generation requirements in an area being served by merchant plants as opposed to existing base load generations.

In other words, once pool requirements can no longer be met by the load generations dedicated to native load, looking at that incremental generation and figure out if it can be dispatched and sold more efficiently and economically under an RTO model.

MR. TURNER: Yes, I think that you are probably seeing some of that already in these results if you were to consider what gets built in different regions.

Some regions are building more than they need for their own purposes, and that's because of these interregional trading opportunities. You could, for example, I mean to some degree we have got cases here where those opportunities for regional trade are more or less available, more or less restricted; and that's part of the RTO development in these runs.

You could take that to a further extreme if you wanted a different case and actually prevent or prohibit, constrain the model from any interregional trade that, for some region if you wanted to even more dramatically indicate that a region may or may not build additional generation when they have interregional trade or export as

an option. I mean you could do that in a more extreme fashion than we have done it, but I think it is part of what is already in these results.

It is a question of how much detail you want to consider there.

MR. RUSSO: In the existing report, which specific regions sort of illustrate what Sandy is asking about with respect to the incremental generation more than others?

I mean what is sort of the best example of the regions that we have analyzed in the report? Illustrate that.

MR. TURNER: Well, the classic answer to that is a region which has cheaper natural gas delivery would be in an advantaged position and they would build their gas plants to serve other regions. Because it is less expensive normally you would expect those regions to be places like the region nearer to the gas production typically. So the interior west, for example, or parts of the southeast would be the sorts of regions you would expect that kind of phenomenon to come in.

Again, I need to get better guidance from the Commission about how much detail we are talking about before I say this region or that region and they built this much.

MR. MERONEY: Jim, at this stage, you can certainly talk in terms of examples. I think the issue that you are talking about more is exacting at what level of detail are the specifics going to be released by the Commission.

I would just like to sum up with a thing of reinforcing one of the things that I think Charlie was saying. This model is really focusing on economically efficient outcomes. It is not taking a position with respect to retail access and with respect to some things that might be linked in discussion with RTO development.

It is assuming RTOs come in, that they facilitate efficient markets in the areas; but all throughout the development of RTOs since '88 and the ISOs that were under that, these developments are not necessarily linked to a particular regime with retail or other things that might affect the development of power in a particular area such as citing.

We are not trying to conceive of this as some way to encroach on anybody else's jurisdiction. So it just happens to be very difficult with a model like this to make a generic call. So you have a generic sort of run becomes the retail access run because it gets fairly well entwined with exactly how you people would think that would play out.

There are actually quite a few disagreements about how much efficiency or inefficiency is induced by particular configurations going forward.

And so this study is assuming that you get some competitive effects out of RTOs in any of these cases.

Does that sound like a fair description of what you thought you were doing, Jim?

MR. TURNER: Well, yes, because to me the amplifying concept is contracts, right? I mean either the system dispatches efficiently and somehow those prices get put through to someone or you have got a contract system, whether you want to call that native load or not, it is creating a different outcome.

That's certainly plausible, but the way we did it for this study, again because it is national and long run mostly, we decided to preserve the competitive dispatch within each region and people can I think take pricing from that and actually -- you could actually impose different sorts of contract mechanisms on that if you wanted to think about consumer impact.

As long as the spots sort of pool clearing in the region occurring for dispatch, you can actually think about that a number of different ways and it wouldn't affect the results of this study.

MS. HOCHSTETTER: Sandy Hochstetter again. So

what you are saying is it wouldn't affect the cost benefit equation?

In other words, if you didn't dispatch on a competitive basis, the existing base load generation, that's not going to have an impact or change the benefit calculations?

MR. TURNER: What I am saying, no, is that we assumed the competitive dispatch would occur. As long as that pulls the hold, the results here would hold. That's an efficiency result rather than an equity result.

If you interfere with the competitive dispatch by imposing a contract requirement on the generators, then you have a different result. That would have to be analyzed as a different case.

MS. HOCHSTETTER: Okay. In other words, you are saying that these cost benefit results are only applicable if all existing generation goes into the competitive wholesale market?

MR. TURNER: Or some equivalent that gets you the same dispatch, yes.

MR. MERONEY: We are assuming in particular that RTOs per se don't necessarily affect that, but they do result in overall efficiencies in any case.

Whatever is -- it is not making specific assumptions about the wholesale market in that sense

because there aren't specific parameters in the model that would, for example, create something that was a particular way in which contracts played out or native load played out.

It is assuming that whoever is sort of holding the rights of this dispatch, let it be dispatched fairly and efficiently. Now, if it is native load, then the result is things are sort of -- economy sales, for example, are directly captured for customers, then that's a question of where the resulting benefits go.

But we are, nevertheless, assuming whether it happens as a result of a retail regime or just because there are more players in the wholesale market who are reselling to native load, for example, that RTOs have an effect on the overall competitive environment.

MR. WHITMORE: Let me ask one question on this, Jim.

Is it the case that this assumption of efficient dispatch is the same in the base case and all the other cases?

MR. TURNER: Yes. It is.

MR. WHITMORE: In looking at the benefit side of this, there is no difference between the way this is treated in the base case that's being compared to in the policy?

MR. TURNER: Yes, that's right.

MR. WHITMORE: So any problem that people might have with one, they have with the other as well?

MR. TURNER: That's exactly right. If people think there is some set of contract requirements that's affecting the generators and keeping the efficient or the sort of optimal dispatch from occurring, that would be just as true in the base case as it would be in the policy.

MR. WHITMORE: The result is if you did a different set of runs that assumed a different kind of dispatch, you would do that both for the base case and the policy case and the end result would likely be a continuing set of benefits?

MR. TURNER: Probably, yes. If the assumptions that differ between the base and the policy case are similar to the ones we have got here, then you could run the dispatch differently in a base case and run it differently in a policy case. Probably get the sort of shift between the cases that you have got here, but it is hard to say.

The details would be presumably quite different.

MR. SCOTT: Greg Scott. I am a Commissioner on the Minnesota Commission. Can I step back and ask a bigger picture question?

Was this report intended to be an objective

analysis or was this report commissioned specifically to support FERC policy?

MR. MERONEY: It was really intended to be an objective analysis and it was the objectivity analysis that was supposed to be supportive of the decision.

MR. SCOTT: I just wondered because it just seems that there is an interesting dynamic going on where FERC folks are serving up softballs to Mr. Turner and it is amazing to me that Mr. Turner's answers always seem to support the direction that FERC is going.

And to follow up with the gentleman from Tennessee asked the question about the cost benefit analysis and Mr. Turner's response was essentially that it was up to the reader to decide whether the net benefits exceed the net costs.

I am wondering has FERC reached an opinion on whether the study indeed supports the notion that net benefits exceeds net costs?

MR. WHITMORE: This is Charlie Whitmore at FERC. I have no idea what FERC and I don't think anybody in this room has any idea what FERC has concluded or not concluded.

My impression is all of the Commissioners are still looking at this.

I would say a couple of things in response. The

first is that I think both those of us at FERC who are looking at the study and the Commissioners were surprised by at least some of the results. I don't think necessarily going into this that we expected to see price rises in some regions. I don't think we necessarily expected to see the transmission only case would be as small a result as it appears to be.

And I am pretty sure from things that the Chairman has said, for instance, that he is considering carefully the implications of things like that.

In terms of serving up softballs, if that's what it sounds like, I apologize. I am just trying to make sure that we understand what was actually being done here and so --

MR. SCOTT: A followup to that because one of the things that I think especially those in the Midwest are very sensitive to is that sometimes it feels as though folks out in D.C. aren't terribly aware that we are here, first of all, and secondly that we are different. We are not like the east coast, for example, that our market conditions here are different.

And I am wondering if in this study is there room for the FERC to understand that the Midwest ISO, for example, may have market conditions that are different from other ISO market conditions and that, therefore, should

lead to different policies in terms of things like
transmission pricing?

Or sometimes it feels to me like we are basically
trying to do a one size fits all approach.

Is FERC open to the possibility that one size may
not fit all?

DIRECTOR MEYERS: Yes, I mean I think the
Commissioners have said on the record on many occasions
that, sure, there is going to be some standardization
that's needed in market design and the like; but generally
speaking there is going to have to be also some
customization that's going on region by region.

I would like to know if anybody has comment.

MR. SCHRIBER: Alan Schriber from Ohio. I want
to be able to get in here a few minutes.

My reading of this and listening to what I have
heard so far and in the past and having read a few things,
the spirit of this entire exercise rings a little bit
differently with me than perhaps most others.

For one thing, I don't see this as the definitive
policy driving exercise. I see it as real interesting. I
see it as an educational exercise. I see it as one that
gives us the ability to see how certain variables relate to
other variables.

In no way would I assume that the outcome of this

is going to be as I said the definitive policy driver. I think to the extent that there are certain outcomes that may raise flags, then certainly they are worth going for further pursuit.

On the other hand, I also know that all the states have different interests and well they should. I think if we look at it like that and say, yes, we all have differences, we have different ISOs, some of us have more than one; but nevertheless I think that this should be taken as what I think it was intended to be and that is clearly something with which we can run simulations, with which we can -- just a tool that we can begin to play with, if you will.

MR. RUSSO: I think you hit the nail right on the head. This is a tool. We are going to be including this in the dockets of all the pending RTO applications before us and so it is going to certainly be considered; but the notion that the Commission these days would be considering one size fits all for every RTO region, no, I don't think that's the case at all.

In fact, Ed Meyers' group, which I am a part of now, State Relations, is to really explore those differences and really try to arrive at a good working relationship with states and Commissioners in specific regions.

So, sure, we are going to use the report where we can find common ground and we are going to back away from it when State Commissions and regions tell us that we are not quite like this. So there is a good recognition of your differences.

DIRECTOR MEYERS: Let's move onto some good hard fast balls and sliders over the inside corner here.

But obviously this is just one product and the fact is throughout the regions various cost benefits studies are being developed and they will all be part of the equation; but the point we want to make at regional panel meetings, the State regional panel meetings will obviously use this report plus all the other reports and any other arguments and try to arrive at a region by region consensus between FERC and the states as to how we should move forward.

Right now we are just going to try to get at some of this data here. Let's have the tough questions.

MR. GILLIS: This is Gary Gillis. I might have a slider for you. I am not sure about the fast ball.

I am interested in assumptions and unlike Chairman Schriber in Ohio, I don't know the assumptions that were included so I have to continue to ask those.

But on the demand side management or demand side response, what were the assumptions that were included and

how were they included and were they universal?

MR. TURNER: This is Jim Turner here. The demand side of the equation here starts from regional forecasts.

ICF has regional demand forecasts which is similar to NERC forecasts. They start from NERC forecasts but one thing that is important to understand, these days NERC's forecasts include some demand response programs.

They include demand response programs that the utilities report to NERC. So there is some amount of load management going on even in a NERC forecast to start off with, but not very much.

What we did to estimate the potential for some additional demand response was basically to take a rather simple nationwide approach to some consumer price response. And the way we did that was to consider price elasticities between the segment -- between the low demand and high demand parts of each region. There is a price difference.

And what we did was allow something like half -- we made a judgment call just to keep us in sort of a reasonable ball park, we would allow half of consumers to respond with a quite low price elasticity. Price elasticity like 21 which most economists would say was a short run as opposed to long run.

From that we went region by region and applied

that approach statistically and from that we got what amounted to a nationwide key deproduction of 3.4 percent. So that was the assumption that went in for demand response.

It is region by region but the approach is the same for each region.

MR. GILLIS: Did you use the same assumptions in low cost states as you did in high cost states is my question?

MR. TURNER: Well, the assumption is the behavioral assumption. The assumption is the consumer price elasticity. That's the same for all regions. That gives you a different result in a lower cost than a higher cost region, but it is the same behavioral assumption on the consumer side.

MR. GILLIS: I guess my point and what I am trying to make is that in low cost states, behavioral assumptions would be much less and you would save much less in low cost states than you would in high cost states?

MR. TURNER: That's indeed what happens. It is really spread between the peak and off peak that gives you the response in this approach.

If that is a lower spread in one region, there will be a much less demand response because it is the same price elasticity reacting to a smaller price change.

DIRECTOR MEYERS: And, Jim, as I understand it, you only assumed that half of the potential of demand response was used in this as your assumption?

MR. TURNER: Yes, that's right. I think that one way to look at this is to look at again related work on this issue and I think that this kind of overall result in the 3.4 percent range is pretty consistent with other studies.

In fact, you can go back to Oak Ridge that was mentioned in the Oklahoma context, and Eric Herst has done a fair amount of work on this recently. If you go back to the past, Carol Doll collected all the electricity price elasticity that anyone has figured out.

And in previous work several years ago, you know, we were considering all those price elasticities too. So half the consumers have a pretty low price elasticity. We just wanted to get the demand response in the equation in a way that wouldn't be optimistic or pushing the boundaries if you see what I mean.

DIRECTOR MEYERS: Charlie Whitmore indicated earlier that we were surprised around here by some price increases in the regions and some -- and also the fact that the transmission only case produced a pretty small gain.

I have to say also that many people around here and the Commissioners have stated this too that they were

surprised by the extent of the gain from the demand response case. Just tacking on the demand response by itself produced something like a 50 percent gain in overall benefits taking us up to that 60 billion mark.

So there were some surprises on the plus side of the equation as well.

MR. TURNER: Yes, the Commissioners in the FERC meeting expressed a similar viewpoint. If you look at things that Eric Herst has done, he was looking at the effect of having a limited amount of demand response on peak pricing.

There are very dramatic effects. It is something that people need to take very seriously.

DIRECTOR MEYERS: Okay.

MR. PROCTOR: This is Mike Proctor, Missouri. Just to follow up to make sure I understand what's being said, the price elasticity impacts, the .1 percent was only applied to on peak periods?

MR. TURNER: It was applied to the price difference between peak and off peak. It is more of a load shifting requirement.

MR. PROCTOR: Would you explain that? Does that mean off peak load it went up and on peak load went down?

MR. TURNER: Tom, the way we handled it here we basically used it as a peak load reduction. You can do

this a lot of different ways and ICF has actually done this many, many different ways.

We can actually rig the model up to have dynamic demand response. It is one of those things that gets to sort of an experimental point in the modeling and we decided to again take a simple and transparent approach to the issue.

So in this instance we were applying that elasticity change to the spread between the off peak and peak prices and allowing that demand reduction on peak. I can check back. Our expert is David Casson. He is actually doing work right now on this issue for other folks. I would be happy to follow up with him and get back with you on what he did and how it works out.

MR. PROCTOR: Thank you.

DIRECTOR MEYERS: This is Gary Gillis again?

MR. PROCTOR: No, no. This is Mike Proctor, Commissioner.

MR. TURNER: I apologize. I will make a note on that.

DIRECTOR MEYERS: Do we have any further comments or questions or are we wrapping up early now or what?

MR. PROCTOR: This is Mike Proctor from the Missouri Commission: Just one last thing.

From what I looked at and trying to understand

this, understand what's going on in the model and I am almost a little reluctant to pick it up because it focuses on one particular region, and that's the energy region.

What shows up in the transmission only case is that all of the high cost subregions within the RTOs, the highest cost regions get a little bit of a price decrease. Almost all the other lower cost regions get a decrease except in the case of the southeast RTO region with energy.

That's in the transmission only cases. Trying to understand that along with in the RTO policy case, all of the lower cost regions, the six lowest cost regions out of the 32, end up with price increases which I kind of understand because they would be exporting power and, when I looked at those in the 2006 case, they were exporting.

Except again Entergy and in this case Entergy turns out to be a net importer of power and actually experiences a price decrease. Entergy is kind of an anomaly in the model and I frankly don't kind of understand why Entergy isn't exporting like everybody else and why even internally within the region in the transmission only case, why prices are going down there and not in some of the higher priced regions.

MR. TURNER: Well, this is Jim Turner again. That's an interesting observation. Entergy has some characteristics that could result in this sort of effect.

I would have to analyze it a little bit more in depth to be definitive about that.

I can think of two things about Entergy that might make it a little different than some of the other regions. One is the pattern of new builds, already announced new builds going into Entergy. That can create a dramatic capacity overhang that sort of puts them in a different position in terms of meeting their own load. That's one thing that you wonder about.

The other thing you would wonder about is Entergy's role in terms of moving power through the southeast more broadly. That is to say there would be a lot of power going into and out of Entergy and it would be those changes, for instance, the opening up the Florida export market, that could put them in a somewhat different position, sort of throughput or freeway, if you will.

So those would be the sorts of things that you would look at.

Then finally again it comes back down to, you know, what is their regional supply curve like? Do they have a lot of large units that create big stretches of supply curve or do they have a lot of small units that create that sort of ramp up in the supply curve? That's something you want to break down in the detailed results if you were to explain what goes on with Entergy

specifically.

MR. PROCTOR: Mike Proctor. In terms of letting power through, that was the explanation as kind of given in the report. And there is an increase by -- from Entergy into Southern.

However, overall Entergy tends to be an import region. That import for the 2006 scenario are about ten terawatt hours.

MR. TURNER: But that all sits on top of my export pattern in the base case.

MR. PROCTOR: I understand that.

MR. TURNER: Right.

MR. KAISER: Mike Kaiser from Michigan and before we go I would like to make a couple comments. The first of which is to thank the FERC folks for involving the states in the advisory group that did provide some input on this study. And I have to say listening to the questions they are very good and were certainly anticipated based on the work that we did.

I would echo just briefly the Commissioner Schriber's comments and that is we understood that this is a very broad gauged study. It is an aggregate piece of work and there certainly are many specifics that may need further investigation certainly by FERC as well as the regions and individual states.

But it does provide some results that are at least directional in terms of what some of the expectations are and I think we will be able to go back and do a more specific analysis in each of the areas.

One final comment: There has been some discussion about the statistical reliability, putting degrees of competence on this type of study. I really don't think that there is a study that involves so many variables over such a long period of time that could do that. At least from my experience and I have considerable in this area, I just don't think that's doable.

There is certainly other alternatives to exploring the issues involved, but I am not sure that this sort of analysis could ever provide some sort of confidence, at least not that would have any reliability.

Again, I want to thank FERC for involving the states and at least it was helpful providing some assumptions on scenario development.

DIRECTOR MEYERS: Well, along that note, obviously we thank you. I mean everybody on the call.

No, we are not wrapping up, but I just wanted to get this in. We do thank you. There is going to be some criticism that's healthy as to where we are all going with this. We are curious too where the FERC is going to end up in this.

But this all contributes to the policy discussions. But thanks for the process so far.

MR. HUELSMANN: Marty Huelsmann from the Kentucky Commission. Let me ask one. The study assumed that there was no ISOs in existence and I guess I question the fact that there are several ISOs in existence right now and evident in existence. Why they assume none.

Then further, what cost savings are going to be incurred by the utilities for heading RTOs? Is that something we are going to get on the inputs that you are going to give us, the assumptions?

MR. TURNER: This is Jim Turner. We do include the existence in the base case and in the smaller activity case we leave those separated out.

The existing ISOs are incorporated as part of ICF's normal approach to wholesale power market forecasting. In other words, when we establish a base case and this was, you know, carried over into the FERC work, we do include those ISOs that are up and running.

So that would be, you know, the three northeastern ones, California, and Texas. So for those purposes for interregional transmission within those ISOs, that was established in this base case and carried forward.

You asked about cost savings. Do you mean sort

of consolidation savings like control area consolidation of savings?

MR. HUELSMANN: I think one of the reasons to have an RTO other than reliability, there would be some savings on the utilities for having that. So the cost savings of the utilities for having an RTO they would be laying people off and things like that?

MR. TURNER: Right. You would think of a merger type situation, right?

MR. HUELSMANN: Right.

MR. TURNER: That was part of the trade off on operations costs. We decided that it was sort of beyond where we were -- it is outside the model, point one. We did some things that were outside the model; and for operating costs, we were confronted with both.

The difficulties of that kind of institutional analysis because you then have to know or assume which expansion model is going to be used because some areas will consolidate their control areas and others won't. So one model would be to consolidate them. Another model would be leave them where they are and only operate them from a unified market platform.

And that relates back to start up costs because again the degree that an RTO does consolidate existing control areas, it may also build a new operating center,

for instance, or it may lay in new infrastructure, communications infrastructure, fiber optics, that kind of thing.

Those details of the expansion model complicate the assessment of those savings. So we in the end decided to leave that alone and call that a net wash because the trade off between merger type savings and increased functionality and infrastructure requirements to us we couldn't make an assessment, a net call on that one way or the other.

That might have not been laid out as clearly in the study as it should be, but that's actually the way it worked out.

MS. BODE: Denise Bode again from the Oklahoma Commission.

What I am interested in knowing is what the next step is in terms of analysis. As I mentioned earlier, we have done some in-state analysis in Oklahoma with Oak Ridge and after having heard this discussion are probably interested in working with you all to do some more analysis in this area focusing on these issues.

We are wondering what steps FERC is contemplating in terms of taking this analysis a little further and whether other states might be interested in doing a little bit more state focused analysis using the models that are

available.

DIRECTOR MEYERS: Well, you know, I think the next step is coming up on April 9 when the states file your comments and that's something that one could see -- the type of comment that could appear in something like that offering a next step along those lines and, of course, we are going to have those regional panel meetings where we will be discussing I am sure the cost benefit data and how it relates to other data that you may have developed and what policies may come out of that and where do we go from here.

But right now we are at a statistical stage in this study, but it will evolve pretty rapidly into policy discussions.

MR. RUSSO: I think the Commission might be sort of very predisposed to looking at regional analysis as opposed to just a state by state. So I would hope that groups of states in a region would sort of get together, talk amongst yourselves and sort of try to pool your comments and say, look, this is what we are interested in for our specific region and hopefully we can kill several birds with one stone as opposed to going state by state.

That's just some food for thought and my own personal thinking on the issue.

MR. WHITMORE: This is Charlie Whitmore at FERC.

I would just add to that that I think in many respects this study, we looked at it as the beginning of a process rather than the end of a process.

We hoped that we could get a basic framework out on the table that we could then use as a basis for discussion going forward. That's not to say that everything in it is perfect or that there won't be some discussion about what might be changed; but at least we now have a common ground that we can all talk around what assumptions make sense, which ones don't, what else needs to be done and so forth.

On the issues specifically going forward of more analyses, I think my understanding is that what the Commission would like to do is to get all of the requests in, sort of inventory them, see what's there, and then make a decision from there as to what we would like to do going forward by ourselves, what maybe it makes sense to do together with you or other people, and what might make sense for individual or groups of states to do together on their own.

I am sure that, well, I can't swear to this, but I would assume that you are going to be part of that discussion as to who does which bits of that.

DIRECTOR MEYERS: In other words, when the filings come in on April 9, we don't know at this point

whether there are going to be a lot of requests for new information, new runs or whether there will be a few.

So it has to be organized and examined before getting back to you.

MS. BODE: Well, I think that we are very interested in having that that's why we went out and spent our own money doing analysis on our own state.

We have also spent some time looking at what Arkansas has done. I think the Arkansas Commission has also commissioned a study that they have a basis for looking at their own situation at least on transmission and generation.

I know some of the states are in the process of doing that. I would think that kind of information would be critically important for a broader analysis of what the impact and the successfulness of an RTO would be in our area.

Again, I wanted to reiterate I think the numbers that we saw for Oklahoma just don't make sense. Even for now or four years from now, they don't make sense because when you are off \$10, you know, a megawatt hour, that is more than just sort of an -- also the fact that we are being analyzed in a region that we really don't -- we don't think of and people in our region don't think of being what a normal region is in terms of our market for power. Our

market for power really is with Arkansas and with Kansas and in that area going east as opposed to going west.

So the basis for that analysis I don't think -- how successful an RTO can be in terms of trade and all those issues I think is probably not a good basis at least for us.

So I just again want to share those thoughts and that we will be offering our suggestions and our information and I do think it would be a good idea for a little bit -- a relook at some of the base information that you all put into the study and then also doing a little bit more detailed research on how it is going to impact.

Even if you look at it from a regional basis, I would not have eastern New Mexico and Oklahoma together in a region because I think that that's probably not a good basis for looking at what our costs are now and what our production costs and energy costs are in going forward in the future.

DIRECTOR MEYERS: We can say from this side here that the FERC has made a commitment to working with the states and so the states are going to be setting this agenda going forward as well as the FERC.

So if Oklahoma, Arkansas, Washington State, what have you, wish to have a state consideration on the table or whether it is going to be by region or what should be in

the region, all of that are policy items that will be considered if you bring them to the table as we go forward.

MR. WHITMORE: Charly Whitmore. And also we have heard the specifics of what you are asking and I would be virtually certain that we are going to look into it and see what the deal is for both the generation costs and the breakdown of which region is which.

I think we don't know what the answers are to that right now, but we will be looking into it.

MS. MUNNS: This is Diane Munns of the Iowa Utilities Board. I have some concerns coming from the other end as a state that hasn't done the kind of analysis that Oklahoma has done. They have done their studies so they have some point of comparison with what you did to make comment on it.

We haven't done that and so I sit here and think, you know, gee, Oklahoma did their study and it really somewhat contradicts what's coming out here. Do we need to do a study? If we don't allocate our -- are we going to be bit by this thing later on?

We don't have any way to judge the validity without going in and doing that kind of thing. So I guess we have had some discussions here of what is the purpose of this cost benefit analysis. Is this a point in time,

beginning point, or will this be used as a definitive policy driving document?

So that's where my concern is after hearing what Denise had to say.

MR. WHITMORE: Charlie Whitmore. Everybody at the table here is silent and I am not quite sure what to say in terms of individual states. We have done our best to make this as fair a study as possible. I think the consultant has as well.

As I say, when there are discrepancies between this and another study, there are lots and lots of reasons why that might be and until we have a better idea of exactly why discrepancies are there, it is a little hard to judge what to make of them.

I guess my sense would be that this model and the basic approaches used here are things that companies around the country are relying on a lot. We have relied on them before. So has EPA, DOE. So are some states doing it now.

So I think it has got a pretty good track record and before assuming that the discrepancies are the sort that would call into question basic conclusions, I think we need to do a little more research and figure out what's going on with them.

MR. TURNER: Let me make two very quick points

about that. Point one is that we say in the study that one of the things to look for is detailed regional, for instance, matters. It would be very useful to consider both looking at things in more detail from region to region and making some adjustments, some changes to the assumptions, the RTO boundaries, things like that to investigate further how robust the conclusions are to different conditions and different assumptions.

I am personally and I think ICF is generally very focused on uncertainties and very focused on I think the more fundamental task is that these are very large markets geographically and there are very tight links between the regional markets and natural gas, environmental and other input markets.

So one thing that could drive changes or discrepancies between studies is how did one study or another handle changes that might be occurring very far away from your state, but changes might be occurring in New England or in Florida and affecting the Midwest, affecting what Oklahoma wants to do in terms of exports.

So those are very important issues to get a handle on. And I think that beyond that I would just say that I have used a lot of different models in my career. I would like to say that ICF is not necessarily married to one particular model or one particular approach.

I think, for instance, that that Oak Ridge model is a very useful tool to analyze some of these issues. It is just that when you get into the type of work, you have to develop some knowledge, some expertise. You may end up relying on people, trusting people to tell you how the models work and what the results were.

I would be personally happy to advise anybody on different kinds of models and what's the appropriate kind of analysis to look at if anybody is interested in talking about those issues. To me it is very important to consider alternative tools and using the knowledge base that's already out there.

MR. MERONEY: I just would like to reinforce something Tom said before, that this is to the extent that this can be looked at within some sort of regional framework where states or others are kind of pooling their resources to look at it not as broadly as this study has but more regionally in terms of how it affects your region, that that can be fairly important.

There is some value in using the same tools. There is also a fair amount of value in diversity and, in fact, fairly helpful that different parties in the northeast have been looking at the costs of the ISO and different parties in the west have been looking at the ISO west with different models.

I can't speak for the Commission, but I really would say that this is hopefully a decent start to what needs to be a process of looking as closely as possible at how this sort of regional initiative would play out.

MS. MUNNS: Diane Munns again and I appreciate the discussion on this and I guess what I hear you saying is that we all do need to take some time with this analysis and look at our own states and let you know through that comment procedure.

DIRECTOR MEYERS: Right. And this is Ed Meyers. This may be a good time to kind of summarize what you all have asked us to do.

You have given us a number of tasks. Firstly, we are going to be e-mailing you the assumptions used. We are going to get clearance here, of course, but we should be able to get that out to you in the study.

Jim mentioned there might be 50 or 60 of them. We will be doing that for Marty Huelsmann and others. For every one also in response to Gary Gillis, we are going to be e-mailing you the RFP used to kick off this study.

Thirdly in response to Denise Bode, Jim is going to be working with the Oklahoma folks to take a look at those power flows from to the east or versus the west or just get some clarification there and see if we can bring some clarity to the table on that one. We don't have

anything definitive on that, but that will just have to be worked through.

MR. TURNER: We need to get the contact information for that, but we can do that separately.

DIRECTOR MEYERS: Okay.

MS. HOCHSTETTER: Sandy Hochstetter. I have got a procedural question. In light of all the different proceedings that are going forward at FERC and in light of the critical issues that have arisen, I am sure will continue to arise relative to this cost benefit analysis, how are we going to slow down some things or proceed on multiple paths in order to resolve what I think is a pivotal issue, namely this study before we do some other things?

DIRECTOR MEYERS: We have a vehicle established by the FERC and that's the State, Federal regional panels. So obviously at any point in this the FERC could say that we have enough of a consensus and we are going to move. But generally speaking, there is a consensus building process so the pace, policy, general direction, what we need to do next I think there is a process set up to answer all of those questions and we are just going to be getting into them through the state, Federal process as well as the filings that are going to be coming in and placed into the dockets. That's the best I can say for now.

MS. HOCHSTETTER: In other words, RTO decisions can be made and standard market design rules and tariffs promulgated even though we are trying to absorb this concept analysis and --

MR. RUSSO: I think -- I don't want to kid you on this. Certainly there will be movement on all fronts. I think what we are saying is we are going to be making the rest of the Commission staff and the Commission is aware of what's coming out of these teleconferences, the state and Federal panels and sort of to assure the State Commissions that they are being heard and we are passing that information onto the decision makers here.

So if they need to slow down on standard market design, they have that before them and that will be certainly their call. I think that's what they charged us to do essentially.

DIRECTOR MEYERS: Well, they are the policy makers so we are just going to work this process for all we can do and to see where it goes. So we are as curious as you are about this and so we will be setting agendas together.

But just getting back to these deliverables, so the third one was the cost of generation, Oklahoma, whether it is 28 versus 38 and the like.

Fourth, there was a statement made that I

believe, Jim, you said that you would develop a few more slides on how generation efficiencies are achieved?

MR. TURNER: Yes. I would think that the assumptions documents that we have internally looked at for ICF have been released and was developed originally around the November, December, time frame and that was mostly with the base case assumptions.

So I think it would be useful to add a few items on some of the scenario assumptions in order to satisfy people's desire for that information.

DIRECTOR MEYERS: Okay. And, fifth, one of the things we are going to consider, no decisions yet, but the Table 3-7, whether there could be regional breakouts of this and a related matter involves breaking out the TVA separately and some other states and regions have concerns about more detailed data.

We would imagine that some of that will be showing up in the filings of April 9.

Next there was a statement made about trying to net out the production versus the start up costs and ICF made the statement that the data is revealing in the document so that the state's staffs can do this kind of breakout based on the data provided in the report. I don't know if you, Jim, if you are going to make any mid range case on startup costs or anything like that or whether you

just leave it up to the states?

MR. TURNER: My guess that's up to the Commission staff really. I will do whatever I am directed to do.

DIRECTOR MEYERS: So this is one of the items -- some of the things we committed to do now, but others we are going to take into consideration and look at the whole hopperful of requests that are going to be coming in April 9.

Next a question was made about statistical significance and confidence intervals. ICF made the statement that the concept really does not apply here in their judgment. Nevertheless, they are going to go back and think about this and talk to some colleagues there and whether any further statements can be made regarding statistical significance.

And the last one I had, maybe somebody else has taken better notes, but in response to Mike Proctor, maybe a little bit better explanation of the demand response case and exactly how it works and, Jim, did you say you would be providing this?

MR. TURNER: Yes. I think that it might be another thing to put in the assumption documents because again that's a change between the base case and the policy scenarios. It is similar to the generation efficiency assumption.

Maybe I can treat that in explaining a little bit better exactly how that was done in the assumptions. That would be something to look for when that comes in.

MR. RUSSO: I think Mike Proctor also wanted, Ed, a more detailed explanation of the transmission only case. Specifically why production costs go down and pricing goes up.

Is that correct, Mike?

MR. PROCTOR: That's correct. I have been kind of looking at this graph on page I think it was 67 that was trying to explain that and I think I am just looking for a little bit more detail with respect to that figure and what's going on there.

But in part the study is trying to -- I agree -- is trying to address the fact that you can have costs decreasing and yet have overall prices increase.

MR. TURNER: Yes, we certainly made an attempt to explain it. We will explain it further if people want to discuss that at some point. I think it is a very important and somewhat interesting result.

MR. PROCTOR: I am not sure I am looking for anything more.

MR. RUSSO: Is everybody sort of confused by this Figure 3-7?

(No response.)

Silence is an affirmation that you are.

DIRECTOR MEYERS: So I think --

MR. WHITMORE: We are here so.

MR. MERONEY: We could charge Jim with explaining it to Tom's satisfaction perhaps.

DIRECTOR MEYERS: I think --

MR. TURNER: Part of the problem is it would be better to use actual regional supply curves from the runs. That's just a level of detail output that in this study we weren't reporting and so that gets back to the level of information question, we have more on that.

MR. MERONEY: Does ICF have a problem in doing that or is that proprietary stuff or is that only a FERC issue?

MR. TURNER: No, as far as model outputs go, basically you can direct us to whatever level you feel is appropriate.

MR. WHITMORE: It is getting a little late here. We will simply commit that virtually everybody who looks at this study sees this as a problem and we need to come up with a better explanation of what's happening and why and we will do that.

DIRECTOR MEYERS: Okay. Any further business for the call? I sure want to thank everybody for participating and we will have further calls in the future and we will

sign off for now. Have a good day.

(Whereupon, at 12:03 p.m., the teleconference
was concluded.)